

What is claimed is:

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a
- 1 1. A liquid crystal display module, comprising;
2 a liquid crystal display panel having a plurality of
3 scanning lines parallel to a first side of the liquid
4 crystal display panel;
5 a driving circuit unit for generating a first scanning
6 control signal and a second scanning control signal;
7 a first scanning unit, coupled to the driving circuit
8 unit and a second side of the liquid crystal display panel
9 adjacent to the first side of the liquid crystal display
10 panel, for receiving the first scanning control signal and
11 sequentially driving each of the scanning lines in the
12 liquid crystal display panel; and
13 a second scanning unit, coupled to the driving circuit
14 unit and a third side of the liquid crystal display panel
15 opposite to the second side of the liquid crystal display
16 panel, for receiving the second scanning control signal and
17 sequentially driving each of the scanning lines in the
18 liquid crystal display panel; wherein the first scanning
19 unit and the second scanning unit drive one of the scanning
20 lines simultaneously.
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- 1 2. The liquid crystal display module as recited in claim 1,
2 wherein the first scanning unit comprises:
3 a first scanning circuit board, coupled to the driving
4 circuit unit, for receiving the first scanning control
5 signal; and
6 a plurality of first scan drivers, coupled between the
7 first scanning circuit board and the second side of the
8 liquid crystal display panel, for sequentially scanning the
9 scanning lines according to the first scanning control

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10 signal;

11 and the second scanning unit comprises:

12 a second scanning circuit board, coupled to the
13 driving circuit unit, for receiving the second scanning
14 control signal; and

15 a plurality of second scan drivers, coupled to the
16 second scanning circuit board and the third side of the
17 liquid crystal display panel, for sequentially scanning the
18 scanning lines according to the second scanning control
19 signal

20 3. The liquid crystal display module as recited in claim 2,
21 wherein the first scanning circuit board is the same as the
22 second scanning circuit board.

23 4. The liquid crystal display module as recited in claim 3,
24 wherein the first scanning circuit board is connected to
25 the first scan drivers with a first side, and the second
26 scanning circuit board is connected to the scan drivers
27 with a second side opposite to the first side.

28 5. The liquid crystal display module as recited in claim 4,
29 wherein the scanning of the first scan drivers and the
30 scanning of the second scan drivers are in reverse order.

31 6. The liquid crystal display module as recited in claim 2,
32 wherein the first scan drivers and the second scan drivers
33 are integrated circuit in tape carrier packages.

34 7. The liquid crystal display module as recited in claim 1,
35 wherein the first scanning control signal includes a first
36 data-shifting direction signal and the second scanning
37 control signal includes a second data-shifting direction
38 signal.

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1 8. The liquid crystal display module as recited in claim 7,
2 wherein the first data-shifting direction signal of the
3 first scanning control signal and the second data-shifting
4 direction signal of the second scanning control signal
5 represent the reverse shifting directions.

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1 ~~9. A scanning circuit board, located in a liquid crystal~~
2 ~~display module with a liquid crystal display panel, for~~
3 ~~connecting with a plurality of scanning drivers to scan a~~
4 ~~plurality of scanning lines extending from a first side of~~
5 ~~the liquid crystal display panel to a second side of the~~
6 ~~liquid crystal display panel, comprising:~~

7 ~~a connector for connecting with an external connector~~
8 ~~and receiving a scanning control signal;~~

9 ~~a first scanning interface, located at a first side of~~
10 ~~the scanning circuit board, for transferring the scanning~~
11 ~~control signal to the scan drivers connected with the first~~
12 ~~scanning interface and driving each of the scanning lines~~
13 ~~from the first side of the liquid crystal display panel;~~

14 ~~and~~

15 ~~a second scanning interface, located at a second side~~
16 ~~of the scanning circuit board opposite to the first side of~~
17 ~~the scanning circuit board, for transferring the scanning~~
18 ~~control signal to the scan drivers connected with the~~
19 ~~second scanning interface and driving each of the scanning~~
20 ~~lines from the second side of the liquid crystal display~~
21 ~~panel.~~

1 10. The scanning circuit board as recited in claim 9,
2 wherein the scanning control signal contains a data-
3 ~~shifting direction signal.~~

1 11. The scanning circuit board as recited in claim 10,
2 wherein the data-shifting direction signal sent to the
3 first scanning interface and the second scanning interface
4 represent reverse shifting directions.

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